Indirect adaptive fuzzy power system stabilizer

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Description
A power system stabilizer based on adaptive fuzzy technique is presented. The design of a fuzzy logic power system stabilizer (FLPSS) requires the collection of fuzzy IF-THEN rules which are used to initialize an adaptive fuzzy power system AFPSS. The rule-base can be then tuned on-line so that the stabilizer can adapt to the different operating conditions occurring in the power system. The adaptation laws are developed based on a Lyapunov synthesis approach. Assessing the validity of this technique simulation of a power system is conducted and results are discussed.